

**Notice of Allowability**

Application No.

10/039,291

Applicant(s)

COZEAN ET AL.

Examiner

Art Unit

Frederick F. Krass

1614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment dated 2-23-05.
2. ☒ The allowed claim(s) is/are 41,43-49 and 51-63.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                 |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>4-26-05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                        |
|   | 9. <input type="checkbox"/> Other _____   |

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### **Examiner's Amendment**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Salima Merani on 4-26-05.

The following changes have been made:

1) Claims 41 and 43, third and fourth lines of each claim, in each instance "wherein said fluoride mixture has a consistency of a gel or a paste; " has been deleted.

2) Claims 41 and 43, seventh line of each claim; claims 46, 47, 49 and 51-54, second line of each claim; and claim 63, sixth line, in each instance "adapted" has been changed to --- able --

3) Claim 41, seventh line, "at least a portion of" has been deleted.

4) Claims 41 and 43, eighth line of each claim, and claim 63, seventh line, in each instance "and" at the end of the line has been deleted.

5) Claims 41 and 43, ninth and tenth lines of each claim, and claim 63, eighth and ninth lines, in each instance "adapted to reduce or minimize" has been deleted and replaced by --- which does not cause substantial ---

6) Claim 42 has been canceled without prejudice thereto.

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7) Claim 43, seventh line, "viscous" has been deleted.

8) Claim 44, first line, "41" has been changed to --- 43 ---

9) Claim 55, first line, "method" has been changed to --- system ---

10) Claims 61 and 62, first line of each claim, in each instance "55" has been changed to --- 60 ---

#### **Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

As previously stated, none of the prior art of record fairly suggests, teaches or discloses the instantly claimed treatment systems, nor the unexpected synergistic results obtained therewith. Moreover, as discussed throughout the specification, the instant systems also provide unexpectedly better results than conventional laser systems insofar as they permit safer, and yet deeper treatment of the tooth. See, e.g. page 2, lines 10-14; page 3, lines 3-7; page 5, line 13 to page 6, line 8; and page 12, line 15 to page 14, line 16. These improved results could not have been predicted from the prior art and are all the more unexpected given the extremely low amounts of fluorine used.

The phrase "adapted to reduce or minimize" (e.g., claim 41, ninth and tenth lines) did not specify the frame of reference used (i.e., reduced compared to what?) and so was replaced with the alternative phrase --- which does not cause substantial --- in order to place the claims in better form for allowance. This amendment was not intended to change the scope of the claimed language, but merely to restate already claimed subject matter in an alternative and clearer fashion. It will be readily appreciated that use of a relative term is appropriate in this instance since no treatment will absolutely prevent minor, accidental damage; a particular number value cannot be placed on same since some minor variation will occur depending on the health and age of the teeth, the thickness of the enamel layer, etc. The term "substantial" finds reasonable

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implicit support in the specification as originally filed. See for example discussion of damage caused by "significant" amounts of heat (p. 2, line 11) during prior art laser treatments, which is avoided by using wavelengths and energy densities which generate lower amounts of heat, and yet (unexpectedly) do not compromise effectiveness (p. 2, lines 18-20).

USP 6,764,309 is cited for completeness. The reference discloses methods for treating teeth using the same type of light sources used instantly, but is not available as prior art because of its later effective filing date. No issue of obviousness-type patenting is seen to be raised thereby, since the conflicting claims 1) are drawn to methods, not devices 2) include specific, non-obvious process limitations, e.g. they require irradiation of unexposed tooth surfaces (such as interproximal surfaces) in direct contradiction to the instant claims in which the fluoride mixture is to be bound to the (necessarily) exposed tooth surface and 3) they do not suggest the extremely low fluoride contents recited instantly.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick F. Krass whose telephone number is 571-272-0580. The examiner's schedule is as follows:

Monday: 10:30AM- 7PM;  
Tuesday: 10:30AM - 7PM;  
Wednesday: off;  
Thursday: 10:30AM- 7PM; and  
Friday: 10:30AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached at 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick Krass  
Primary Examiner  
Art Unit 1614

